

ABSTRACT

5 A powder metal mixture comprises a lubricant powder conventionally used to
produce powder metal parts in combination with a modified lubricant. A lubricant
conventionally used to compact and sinter a chosen powder metal mixture is modified
by adding to it starch particles smaller than the average metal particle, and optionally,
micronized cellulose fibers in so small an amount that the modified lubricant is
10 present in an amount less than 2% by weight of the mixture. The Hall apparent
density and the Hall flow rate of a powder metal mixture made with the modified
lubricant of starch or (starch + fibers) remains within the ranges deemed desirable for
production of compacted powder metal parts. Using the modified lubricant in lieu of
the conventional lubricant increases green strength of a part made by compacting the
15 mixture and improves dimensional conformance.